What is claimed is:

(1) A sensing tool comprising proteins capable of forming nanoparticles through the incorporation of a lipid bilayer and biorecognition molecules bound thereto.

(2) The sensing tool according to claim 1, wherein the biorecognition molecules are covalently bound to the proteins.

(3) The sensing tool according to claim 1, wherein the nanoparticles are hollow nanoparticles.

(4) The sensing tool according to claim 1, wherein the proteins are virus surface antigen proteins.

(5) The sensing tool according to claim 1, wherein the proteins are hepatitis B virus surface antigen proteins.

(6) The sensing tool according to claim 1, wherein the proteins are capable of forming nanoparticles through the incorporation of a lipid bilayer derived from eukaryotic cells.

(7) The sensing tool according to claim 1, wherein the proteins are capable of forming nanoparticles through the incorporation of a lipid bilayer derived from yeast.

(8) The sensing tool according to claim 1, wherein the proteins are capable of forming nanoparticles through the incorporation of a lipid bilayer derived from animal or insect cells.

(9) The sensing tool according to claim 1, wherein the biorecognition molecules are molecules that control cellular functions.

(10) The sensing tool according to claim 1, wherein the biorecognition molecules are antigens, antibodies, parts of antibodies, or antibody analogues.

(11) The sensing tool according to claim 1, wherein the biorecognition molecules are cell surface or intracellular receptor proteins that bind to ligand substances, mutants thereof, parts thereof, or substances bound thereto.

(12) The sensing tool according to claim 1, wherein the biorecognition molecules are enzymes, mutants thereof, parts thereof, or substances bound thereto.

(13) The sensing tool according to claim 1, wherein at least one type of molecule selected from the group consisting of fluorescent, luminescent, light absorptive, and radioisotope molecules is bound to the biorecognition molecules.

(14) The sensing tool according to claim 1, wherein at least one type of molecule selected from the group consisting of fluorescent, luminescent, light absorptive, and radioisotope molecules is bound to proteins capable of forming particles.

(15) The sensing tool according to claim 1, wherein at least one type of molecule selected from the group consisting of fluorescent, luminescent, light absorptive, and radioisotope molecules is bound to the lipid bilayer.

(16) The sensing tool according to claim 1, wherein at least one type of molecule selected from the group consisting of fluorescent, luminescent, light absorptive, and radioisotope molecules is enclosed in hollow nanoparticles.

(17) The sensing tool according to claim 1, which employs a flat membrane-like array of biorecognition molecules comprising nanoparticles aligned on a substrate.

(18) A biosensing method, which involves the use of the sensing tool according to claim 1.